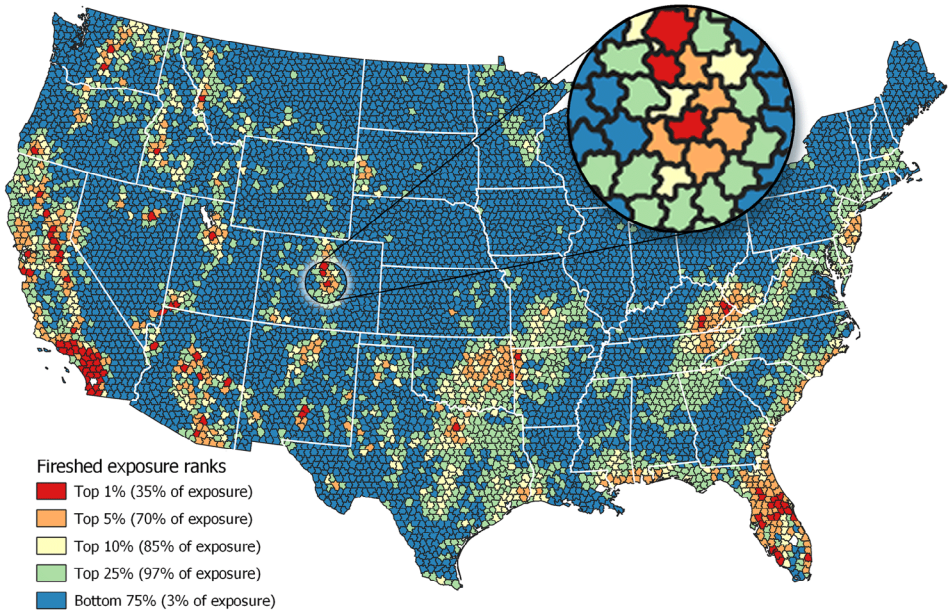
USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE
Rocky Mountain Research Station

# Firesheds at a glance

*Firesheds are a way to delineate where fires ignite and are likely—or not likely—to spread to communities and expose buildings.*

Scientists at the Rocky Mountain Research Station created the Fireshed Registry to show where fuel treatments are needed to stop fire transmission from national forests to developed areas. The Fireshed Registry is a geospatial dashboard for land managers and decision makers to view and map a vast array of data related to wildfire transmission, past, present, and future management, and past and predicted wildfires.

The Registry covers the full continental U.S and includes 192 million hectares of forest land. Fireshed delineations within the tool are not limited by administrative, jurisdictional, or other anthropogenic boundaries. Development and application of the Fireshed Registry is described in this publication.




A national map of the 7,688 firesheds created from community wildfire transmission data. Areas depicted in red are firesheds at highest risk.

## The Fireshed Registry & the Wildfire Crisis Strategy

The concept of firesheds is central to implementation of the Forest Service's Wildfire Crisis Strategy. Decision makers used the Fireshed Registry, paired with a scenario planning tool, to identify initial target areas with highest risk of community and building exposure to wildfire. The Wildfire Crisis Strategy calls for treating an additional 20 million acres on the National Forest System and 30 million acres on other Federal, State, Tribal, and private lands in the West over a 10-year period, as well as developing a plan for long-term maintenance. The all-lands geography of the Fireshed Registry makes it a useful platform for supporting the Wildfire Crisis Strategy.

Access to the Fireshed Registry geospatial dashboard is currently available for Forest Service and partner ArcGIS Online (AGOL) account holders and can be accessed here. Work is in progress to make the Fireshed Registry publicly available; in the meantime, contact the research team for access.

# Frequently Asked Questions

### *What are firesheds?*

Firesheds are containers that delineate areas where fires ignite and are likely (or not) to spread to communities and expose buildings.

### *Is the fireshed map a risk map?*

No. Risk maps predict loss at a particular location. The fireshed map shows the source of exposure. We mapped the source of exposure to understand where treatments are needed to stop fire transmission from national forests to developed areas.

### *Does a fireshed map describe risk to individual communities?*

No, the fireshed map does not depict risk to communities. The fireshed map takes a novel approach to risk by displaying plausible future extreme wildfire events that could potentially expose buildings to wildfire. However, the national fireshed map can be paired with the community exposure map to evaluate risk and develop strategies to protect communities and restore the surrounding forest landscape.

### *Why was the Fireshed Registry created?*

Scientists at the Rocky Mountain Research Station created the Fireshed Registry in response to frequent and wide-ranging questions about where the agency has been conducting forest and fuel management in relation to risk and exposure. The end goal is that it can be used as a tool to examine alignment between regional and forest five-year action plans in relation to existing and national investment strategies.

### *What is building exposure?*

Building exposure is the likelihood and intensity of a fire in the vicinity of a building. It is not the same as risk— risk predicts loss; exposure does not.

### *What is next for the Fireshed Registry?*

The team is strategizing the use scenario planning models to make the Registry more applicable at local scales.

Find more information and Frequently Asked Questions here.

79.4 million simulated fires using data from the FSim library

\+ 124,828,569 building footprints including housing units, apartments, and farm, storage, and industrial buildings, etc.

\+ fireshed boundaries created by dividing up the landscape into regular-sized units that represent similar source levels of community exposure to wildfire

\+ community boundaries that include both core areas defined by the U.S. Census populated places data (U.S. Census Bureau 2016) and the adjacent WUI

= Data used to develop the geospatial Fireshed Registry

The Scenario Planning Investment Platform is a modelling framework used to build and analyze management scenarios. The Fireshed Registry was built as a data warehouse for the scenario planning model and stores data for simulating specific investment scenarios.

## How else is the Fireshed Registry being used?

The Fireshed Registry is the data backbone for the Scenario Planning Investment Platform, which simulates specific investment scenarios and resulting possible outcomes for reducing fire risk to communities. It is also used to inform shared stewardship efforts, to help prioritize restoration projects, and is used to inform the development of performance metrics. The Registry is being used to address Executive Order 13855, “Promoting Active Management of America’s Forests, Rangelands, and Other Federal Lands to Improve Conditions and Reduce Wildfire Risk, Section 5 Wildfire Strategy.”